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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,330	07/19/2001	Dale C. Flanders	1035us	9626
25263	7590	11/03/2004	EXAMINER	
J GRANT HOUSTON AXSUN TECHNOLOGIES INC 1 FORTUNE DRIVE BILLERICA, MA 01821			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/909,330

Applicant(s)

FLANDERS, DALE C.

Examiner

Dung (Michael) T Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 18-20 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-20 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-16 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 7, 16, 18-20, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Daiber (US2003/0021303).

With respect to claims 1-2, 16, 18-19, and 29, Daiber discloses in Fig.2 and 4 a semiconductor gain medium 12 for a linear laser cavity 34; an intracavity filter 24, in the laser cavity 34, having a filter function specifying a frequency of operation of the laser; and modulation system 36 (MEMS in para. 0010) that

modulates an optical length of the laser cavity to change spectral locations of longitudinal modes of the laser cavity relative to the filter function; wherein a temperature of the system is allowed to fluctuate with ambient temperature while the modulation system 36 modulates the optical length of the laser cavity to change spectral locations of longitudinal modes of the laser cavity 34 relative to the filter function; and wherein the laser cavity 34 oscillates in only a single longitudinal mode (para.0011).

With respect to claim 7, Daiber discloses in Fig.4 the gain medium 12 has an antireflection coated front facet 16 and a back facet 18 coated to be reflective.

With respect to claim 20, Daiber discloses the modulation system 36 comprising a semiconductor substrate (para.0037).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daiber (US2003/0021303) in view of Sullivan et al. (US6466185).

With respect to claims 3-4, Daiber discloses all limitations of the claims except for the quarter wave plate. Sullivan teach the quarter wave plate 104 (Fig.9). For the benefit of controlling the laser light polarization, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Daiber the quarter wave plate as taught by Sullivan.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daiber (US2003/0021303) in view of Lieberman et al. (US6650810). Daiber disclose all limitations of the claim except for the gratings. Lieberman teach the gratings 56 (Fig.3). For the benefit of controlling a laser polarization system, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Daiber the gratings as taught by Lieberman.

Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daiber (US2003/0021303) in view of Takara et al. (US5646774).

With respect to claim 6, Daiber disclose all limitations of the claim except for the semiconductor optical amplifier (SOA). Takara teach the SOA 3 in Fig.1. For the benefit of a laser external cavity, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Daiber a SOA as taught by Takara.

With respect to claim 14, Takara disclose an isolator 4 in Fig.4.

Claims 8-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daiber (US2003/0021303) in view of Ohshima et al. (US4998256).

With respect to claims 8-10 and 13, Daiber disclose all limitations of the claims except for the monitor diode. Ohshima teach the monitor diodes 18 and 21 (Fig.9). For the benefit of detecting the laser light, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to provide Daiber the monitor diode as taught by Ohshima.

With respect to claims 11-12, Ohshima show in Fig.9 a hermetic cover 43 and a window 431.

With respect to claim 15, Ohshima show in Fig.9 a focus lens 13 and an optical fiber pigtail 14.

#### Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

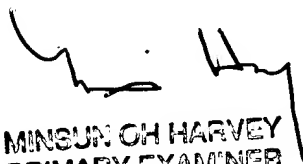
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Michael Dung Nguyen

  
MINSUN OH HARVEY  
PRIMARY EXAMINER